

REMARKS / ARGUMENTS

I. General Remarks

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of the application.

II. Disposition of Claims

Claims 1-3, 5-18, and 60-62 are pending in this application. Claims 4, 18, and 22 were cancelled previously. Claims 19-59 were cancelled previously in response to a restriction requirement.

In this Response, claims 1, 3, 5, 7, 9, 12, 13, 17, and 60-62 have been amended. These amendments are supported by the specification as filed.

Claims 1-3, 6-18, and 62 stand rejected under 35 U.S.C. § 112. Claims 1-3, 5-16, 18, and 60-62 stand rejected under 35 U.S.C. § 102(b). Claim 17 stands rejected under 35 U.S.C. § 103(a).

III. Rejections of Claims

A. Rejections of Claims Under 35 U.S.C. § 112

Claims 1-3, 6-18, and 62 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. (See Final Office Action at ¶ 2.) With respect to these rejections, the Final Office Action states that “[t]he limitations of a particle size greater than 300 microns is not supported by the specification and claims as originally filed and therefore constitute new matter.” *Id.* In response to Applicants’ remarks regarding these rejections in their previous response, the Final Office Action states:

Applicant [argues] that the specification has sufficient support for the limitations of a particle size greater than 300 microns. Applicant argues that to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor has possession of the claimed invention. Applicant’s arguments are unpersuasive since it seems that applicant is arguing enablement and the rejection of the claims is based on a new matter rejection. Applicant also argues that since the instant specification teaches a particle size in the range of from about 400 mesh to about 8 mesh, the limitations of an average particle size greater than 300 microns is supported

by the specification. There is no recitation or suggestion in the original specification of the limitations of a particle size greater than 300 microns. Additionally, a particle size of greater than 300 microns could be outside the range of 400 mesh to about 8 mesh. A particle size of greater than 300 microns does not include the lower limit of 400 mesh, as exemplified in applicant's embodiment. The particle size of greater than 300 microns can include particle sizes that are greater than 8 mesh and therefore either limit of the range, including numbers between the range of 400 mesh to about 8 mesh would be excluded from applicant's claimed limitations of greater than 300 micron.

Additionally, [if] applicant is relying on the range of 400 mesh to about 8 mesh to support the particle size of greater than 300 microns, the range raises issues of nonenablement since greater than 300 microns includes values outside of the range of 400 mesh to about 8 mesh.

Id. at ¶ 11 (emphasis added). Applicants respectfully disagree.

In order to properly reject a claim under § 112, first paragraph, “[t]he examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims.” MANUAL OF PATENT EXAMINING PROCEDURE § 2163(II)(A)(3)(b) (2005). Merely arguing lack of explicit “recitation or suggestion” in the disclosure, as the Final Office Action states above, is not sufficient to satisfy this burden. *See In re Wertheim*, 541 F.2d 257, 265 (CCPA 1976) (“The PTO has done nothing more than argue lack of literal support, which is not enough.”).

Rather, the determination of whether a claim limitation is sufficiently supported in the specification as filed (*i.e.*, whether the narrowing of a numerical range limitation constitutes the addition of new matter) “must take into account which ranges one skilled in the art would consider inherently supported by the discussion in the original disclosure.” MANUAL OF PATENT EXAMINING PROCEDURE § 2163.05 (2005) (discussing *In re Wertheim*, 541 F.2d 257, where a disclosed range of “25%-60%” range did not support a new limitation of “at least 35%,” but it did support a new limitation of “between 35% and 60%”); *see id.* at § 706.03(o) (discussing new matter rejections, and referring to *In re Wertheim* and MPEP § 2163.05 for determining whether addition of specific numerical ranges after a broader disclosure constitutes new matter). Applicants' specification as filed contains at least the following discussion of particle sizes:

The degradable particles generally should have a particle size that is suitable for use in jetting tools that may be used in the methods of the present invention. In an exemplary embodiment, the degradable particles should have an average particle size in the range of from about 400 mesh to about 8 mesh. In other exemplary embodiments, the degradable particles should have an average particle size in the range of from about 100 mesh to about 40 mesh.

(Application at ¶ 0020.) A size of 400 mesh corresponds to 37 microns; a size of 8 mesh corresponds to 2.38 millimeters, or 2,380 microns. (See “Particle Size Conversion,” Sigma Aldrich Co., at http://www.sigmaaldrich.com/Area_of_Interest/Laboratory_Essentials/LabBasics/Key_Resources/Technical_Library/Particle_Size_Conversion.html.) Applicants have amended claims 1 and 62 to require that the average size of the degradable particles be from about 350 µm to about 2,380 µm. Similarly to the limitation of “between 35% and 60%” discussed in MPEP § 2163.05 and *In re Wertheim* above, a person skilled in the art would consider this range of average particle sizes to be inherently supported by at least the portion of Applicants’ disclosure quoted above.

Therefore, for at least these reasons, Applicants respectfully request the withdrawal of these § 112 rejections with respect to claims 1, 62, and all claims depending therefrom (*i.e.*, claims 2, 3, and 6-18).

B. Rejections of Claims Under 35 U.S.C. § 102(b)

1. Rejections of Claims Over U.S. Patent No. 4,575,396

Claims 1-3, 5, 14, and 60-62 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,575,396 to Matsumoto *et al.* (“*Matsumoto*”). With respect to these rejections, the Final Office Action states:

Matsumoto teaches a method of wet blasting a surface with blasting media in order to clean the surface. In col. 3, lines 5-10, Matsumoto teaches blasting media comprising particles having a diameters of less than 0.5mm, which is equivalent to 500 microns. In col. 6, lines 20-25, Matsumoto teaches jetting the blasting media with water and compressed air against the object to be cleaned. In reference to claims 2-3, refer to col. 6, lines 20-25. In reference to claim 5, refer to col. 4, lines 27-29. In reference to claim 14, the limitations are inherently met since Matsumoto teaches a particle size of less than 500 microns. In reference to claims 61-62, refer to col. 4, lines 25-29 and col. 3, lines 3-5.

Applicant argues that the claims are not anticipated by *Matsumoto*. Specifically, applicant argues that *Matsumoto* teaches hard particles and fails to teach degradable particles. Applicant's arguments are unpersuasive because *Matsumoto* teaches the same particle composition as the instant specification. Specifically, paragraph 14 of the instant specification teaches that the particles can be polycarbonates and *Matsumoto* teaches particles made of polycarbonate.

(Final Office Action at ¶¶ 4 & 12.) Applicants respectfully disagree with these rejections.

In order to form a basis for a rejection under 35 U.S.C. § 102(b), a prior art reference must disclose each and every element as set forth in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2005). In this response, Applicants have amended claims 1 and 60 to recite allowing at least a portion of at least one of the degradable particles to degrade. Applicants respectfully assert that *Matsumoto* does not disclose or teach this step. Therefore, *Matsumoto* cannot anticipate Applicants' claims.

Matsumoto does disclose the use of "preferred resins" for forming masses that comprise "polycarbonate, polyacetyl, and polyester," and discloses that they "are normally available in both thermo-plastic and thermo-setting resins." (*Matsumoto* at col. 4, ll. 27-30.) However, *Matsumoto* does not disclose a method that includes allowing these materials, or any other materials, to at least partially degrade.

The Final Office Action implies that *Matsumoto*'s disclosure of polycarbonates generally teaches the use of degradable particles based on Applicants' disclosure that the degradable particles may comprise certain aliphatic polycarbonates. However, in order for a prior art reference's disclosure to anticipate a claim, "[t]he identical invention must be shown in as complete detail [in the prior art reference] as is contained in the claim." MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2005). *Matsumoto* fails to specifically disclose or teach polycarbonate particulates, or any other particulates, that are degradable as recited in Applicants' claims. Nor does the Final Office Action establish that the polycarbonates disclosed in *Matsumoto* would be inherently degradable since the Final Office Action states no "basis in fact and/or technical reasoning to reasonably support the determination that the [property of being degradable] necessarily flows from" *Matsumoto*'s teachings of polycarbonates generally. *Id.* at § 2112.02 (quoting *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)

(emphasis in original)). Therefore, even though the degradable particulates recited in Applicants' claims may comprise certain polycarbonates (*e.g.*, aliphatic polycarbonates), *Matsumoto's* generic teaching of polycarbonates—which may or may not be degradable—does not anticipate Applicants' claims.

Therefore, because *Matsumoto* does not disclose or teach allowing at least a portion of at least one of the degradable particles to degrade, Applicants respectfully assert that *Matsumoto* does not disclose each element of claims 1 and 60, as amended herein. Thus, *Matsumoto* cannot anticipate these claims, and claims 1 and 60 are allowable over *Matsumoto*. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 2, 3, 5, 14, 61, and 62 depend, either directly or indirectly, from independent claim 1 or 60, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully requests the withdrawal of these rejections.

2. Rejections of Claims Over U.S. Patent No. 5,865,902

Claims 1-3, 10-16, and 18 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,865,902 to Yam *et al.* (“*Yam*”). With respect to these rejections, the Final Office Action states:

Yam *et al.* teach a method of cleaning electronic hardware by lasting with an abrasive media comprising a water soluble alkaline salt of bicarbonate and carbonate. Yam teaches particle sizes no larger than about 300 microns in diameter (Abstract). The limitations of greater than 300 microns reads on the teachings of Yam since “about 300 microns” can include values greater than 300 microns” (*i.e.* 301-303microns). In reference to claims 2-3, refer to col. 5, lines 10-13. In reference to claims 10-13, the limitations are met since Yam teaches a bicarbonate salt. In reference to claim 14, refer to col. 7, lines 28-47. In reference to claim 15, refer to col. 5, lines 30-35. In reference to claim 16, refer to coal. 5, lines 55-62. In reference to claim 18, refer to col. 5, lines 30-35.

Applicant argues that Yam teaches particle sizes not more than about 300 microns and fails to teach a particle size greater than about 300 microns. Applicant's arguments are unpersuasive since no larger than about 300 microns reads on the teachings of Yam

since “about 300 microns” can include values greater than 300 microns (i.e. 301-303 microns).

(Final Office Action at ¶¶ 5 & 13.) Applicants respectfully disagree with these rejections.

In order to form a basis for a rejection under 35 U.S.C. § 102(b), a prior art reference must disclose each and every element as set forth in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2005). In this response, Applicants have amended claim 1 to recite that the degradable particles have an average particle size of from about 350 µm to about 2,380 µm. However, *Yam* does not disclose or teach particles of this size. Rather, *Yam* teaches the use of particles of alkaline salts that are “no larger than about 300 microns in diameter.” (*Yam* at Abstract.) Therefore, the particle sizes disclosed in *Yam* do not read on those recited in Applicants’ claims, and thus *Yam* cannot anticipate Applicants’ claims.

Because *Yam* cannot anticipate claim 1, as amended herein, this claim allowable over *Yam*. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 2, 3, 10-16, and 18 depend, either directly or indirectly, from independent claim 1, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully requests the withdrawal of these rejections.

3. Rejections of Claims Over U.S. Patent No. 5,993,562

Claims 1-3 and 6-14 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,993,562 to Roelofs *et al.* (“*Roelofs*”). With respect to these rejections, the Final Office Action states:

Roelofs teaches a method of cleaning the interior surfaces of a fluid delivery system by blasting with an abrasive particle in a liquid carrier. In col. 6, lines 1-65, Roelofs teaches particle sizes ranging from 5-500 microns. In reference to claims 2-3 refer to col. 6, lines 53-55. In reference to claims 6-7 and 10-13, refer to col. 6, lines 30-39 which teach abrasive particles comprising starch, boric acid, calcium borate, zinc borate, and sodium bicarbonate. In reference to claims 8-9, refer to co. 6, lines 53-67. In reference to claim 14, the limitations are inherently met since Roelofs teaches the claimed particle size.

Applicant argues that Roelofs ... fails to teach jetting against a surface to be cleaned. Applicant’s argues that the flow of the

abrasive cleaner of Roelofs is not the same as “jetting”. Applicant’s arguments are unpersuasive. Jetting, as defined by Webster’s dictionary, means to emit a stream. Roelofs teaches circulating the abrasive cleaner at a predetermined flow rate in order to abrade the material that is to be removed from the fluid delivery system. The force of the abrasive cleaner as it is circulated through the interior surface of the fluid delivery system reads on the claimed limitation of jetting.

(Final Office Action at ¶¶ 6 & 14.) Applicants respectfully disagree with these rejections.

In order to form a basis for a rejection under 35 U.S.C. § 102(b), a prior art reference must disclose each and every element as set forth in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2005). In this response, Applicants have amended claim 1 to recite that the cleaning fluid is jetted at the surface to be cleaned at a jet pressure differential of above about 60 psi. However, *Roelofs* does not disclose or teach jetting a cleaning fluid at a jet pressure differential above about 60 psi. Rather, the teachings of flow rate in *Roelofs* only correspond to much lower jet pressure differentials:

Therefore, the method of the present invention can be and preferably is operated so that the flow of abrasive cleaner or abrasive-containing cleaner composition is under conditions that are similar to what the filter tube manufacturer suggests for circulating paint in ultrafilter systems. For example, ABCOR tubular filter units operate at about 35 to 40 gallons per minute (132 to 151 liters per minute) with an inlet pressure of 70 psi (483 kPa) and an outlet pressure of 10 psi (69 kPa). Another example is the commonly used 8-inch (20 centimeters) (cm) spiral “sanitary design” filter cartridge manufactured by AMT or OSMONICS that can be operated at about 60 to 70 gallons per minute (227 to 265 liters per minute) with 55 psi (379 kPa) inlet pressure and 25 psi (172 kPa) outlet pressure. Of course, the inlet and outlet pressures reflect the flow rate which can vary significantly from system to system.

(*Roelofs* at col. 5, ll. 44-59 (emphasis added).) The highest jet pressure differential (*i.e.*, difference between inlet pressure and outlet pressure) taught by *Roelofs* is the first of the two in the above quoted passage, which is equal to 60 psi. Therefore, the inlet/outlet pressures disclosed in *Roelofs* do not teach a jet pressure differential that is above about 60 psi, as recited in claim 1, as amended herein, and thus *Roelofs* cannot anticipate this claim.

Because *Roelofs* cannot anticipate claim 1, this claim allowable over *Roelofs*. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the

limitations of the claim to which it refers,” and since claims 2, 3, and 6-14 depend, either directly or indirectly, from independent claim 1, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully requests the withdrawal of these rejections.

C. Rejections of Claims Under 35 U.S.C. § 103(a)

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over *Roelofs* in view of European Patent Application Publication No. EP0510762 by Houghton *et al.* (“*Houghton*”). With respect to this rejection, the Final Office Action states:

Roelofs fails to teach the limitations of claim 17. Houghton teaches a cleaning composition comprising abrasive particles, such as perborate compounds. On page 8, lines 50-65, Houghton teaches that the cleaning compositions include conventional adjuvants such as corrosion inhibitors. It would have been obvious to a person of ordinary skill in the art to modify the methods of Roelofs to include adjuvants, such as corrosion inhibitors, as taught by Houghton, which are conventionally used in the cleaning compositions.

Applicant argues that ... Roelofs in combination with Houghton fails to teach jetting against a surface to be cleaned. Applicant’s argues that the flow of the abraasive cleaner of Roelofs is not the same as “jetting”. Applicant’s arguments are unpersuasive. Jetting, as defined by Webster’s dictionary, means to emit a stream. Roelofs teaches circulating the abraasive cleaner at a predetermined flow rate in order to abrade the material that is to be removed from the fluid delivery system. The force of the abraasive cleaner as it is circulated through the interior surface of the fluid delivery system reads on the claimed limitation of jetting.

(Final Office Action at ¶¶ 10 & 14.) Applicants respectfully disagree with these rejections.

To form a basis for a § 103(a) rejection, a combination of prior art references must teach or suggest each element in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2142 (2005). However, as discussed in Section III.B.3. above, *Roelofs* does not teach or suggest jetting a cleaning fluid at a surface to be cleaned at a jet pressure differential of above about 60 psi, as recited in claim 1, as amended herein. Nor does *Houghton* teach or suggest this limitation. Rather, *Houghton* only teaches certain types of cleaning fluids, and does not mention jetting a cleaning fluid at a surface at all, much less jetting at any particular jet pressure

differential. Since claim 17 depends from claim 1, claim 17 also incorporates this limitation that neither *Roelofs* nor *Houghton* teaches or suggests. See 35 U.S.C. § 112 ¶ 4 (2004). Therefore, since neither *Roelofs* nor *Houghton* teaches jetting a cleaning fluid at a jet pressure differential above about 60 psi, the combination of *Roelofs* and *Houghton* cannot obviate claim 17. Accordingly, Applicants respectfully request the withdrawal of this rejection.

SUMMARY

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Because this response has been filed within two months of when the Final Office Action was issued, Applicants respectfully request that the Examiner issue an advisory action if the Examiner does not find the claims to be allowable in light of the amendments and remarks made herein. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that there are no fees due in association with this filing of this Response. However, should the Commissioner deem that any additional fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300.

Respectfully submitted,



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